

TABLE 59

Domestic total employment, R&D employment, and level of education of researchers, by activity, industry, and company size: 2019

(Thousands)

Industry and company size	NAICS code	Total employment	Total R&D employment	Researchers ^a		R&D technicians and equivalent staff	Other R&D supporting staff
				Total	With PhD		
All industries	21–23, 31–33, 42–81	21,213	1,832	1,232	130	426	174
Manufacturing industries	31–33	10,100	962	652	79	206	105
Food	311	985	23	12	2 i	6	4
Beverage and tobacco products	312	391	6	3	1	2	1
Textile, apparel, and leather products	313–16	220	7	3	1	3	1
Wood products	321	105	3	1	*	1	*
Paper	322	193	5	4	*	2	*
Printing and related support activities	323	262	i 5	i 3	i *	i 1	i 1
Petroleum and coal products	324	91	6	1	*	4	1
Chemicals	325	1,451	186	127	34	33	26
Basic chemicals	3251	246	12	7	3	4	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	83	6	4	1	1	*
Pesticide, fertilizer, and other agricultural chemicals	3253	69	7	4	1	2	1
Pharmaceuticals and medicines	3254	648	139	95	27	22	21
Soap, cleaning compound, and toilet preparation	3256	245	11	9	1	1	1
Paint, coating, adhesive, and other chemicals	3255, 3259	160	10	7	1	2	1
Plastics and rubber products	326	495	25	11	1	10	3
Nonmetallic mineral products	327	139	7 i	i 4	i *	i 1	i 1
Primary metals	331	216	8	2	*	2	3
Fabricated metal products	332	387	34	14	*	14	6
Machinery	333	869	95	62	4	25	8
Agricultural implement	33311	100	13	8	*	4	1
Semiconductor machinery	333242	37	12	10	2	2	1
Engine, turbine, and power transmission equipment	3336	79	7	5	*	1	*
Other machinery	other 333	654	63	39	2 i	17	6
Computer and electronic products	334	1,167	264	210	22 i	35	19
Communications equipment	3342	151	40	31	1	6	3
Semiconductor and other electronic components	3344	309	95	80	10 i	10	5
Navigational, measuring, electromedical, and control instruments	3345	485	75	56 i	5	14 i	5 i
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	96	16 i	i 12	i 1	i 3	i 1
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	205	33	26 i	2	5	2 i
Other measuring and controlling device	other 3345	185	26	18	3	6	2
Other computer and electronic products	other 334	221	54	43	5 i	5 i	5
Electrical equipment, appliances, and components	335	319	25	16	1	6	2
Transportation equipment	336	1,835	183	126	7	36	20
Motor vehicles, bodies, trailers, and parts	3361–63	1,040	108	78	4	18	12
Aerospace products and parts	3364	612	61	42	3 i	14	6
Aircraft, aircraft engine, and aircraft parts	336411–13	588	54	37	3 i	12	5

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Guided missile, space vehicle, and related parts	336414–15, 336419	24	7	5	*	2	1
Military armored vehicle, tank, and tank component	336992	3	1	*	*	1	0
Other transportation	other 336	180	12	6	*	4	2
Furniture and related products	337	139	4	2	*	1	1
Miscellaneous	339	837	78	49	5	21	8
Medical equipment and supplies	3391	586	59	38	4	16	5
Other miscellaneous manufacturing	3399	250	19	10	*	6	3
Nonmanufacturing industries	21–23, 42–81	11,113	870	580	51	221	69
Mining, quarrying, oil and gas extraction, and support activities	21	181	12	7	1	3	2
Utilities	22	348	0 - 23	0 - 2	*	0 - 21	*
Wholesale trade	42	255	i 13	4 - 7	*	3 - 7	3
Electronic shopping and electronic auctions	454111–12	413 - 1,005	38 - 64	22 - 64	5	0 - 30	0 - 8
Transportation and warehousing	48–49	1,047	18	i 13	i 1	3	i 2
Information	51	2,107	359	266	21	73	20
Publishing	511	359	110	87	7	16	6
Newspaper, periodical, book, and directory publishers	5111	3	1	*	*	*	*
Software publishers	5112	355	109	87	7	16	6
Telecommunications	517	606	19	9	i 1	10	i *
Data processing, hosting, and related services	518	768	126	84	3	31	10
Other information	other 51	375	104	86	11	15	3
Finance and insurance	52	1,795	54	27	1	21	6
Real estate and rental and leasing	53	25	4	3	*	*	i *
Lessors of nonfinancial intangible assets (except copyrighted works)	533	1	*	*	*	*	i *
Other real estate and rental and leasing	other 53	24	3	3	*	*	i *
Professional, scientific, and technical services	54	1,421	299	181	19	88	31
Architectural, engineering, and related services	5413	323	58	40	3	14	5
Computer systems design and related services	5415	482	99	74	5	20	5
Scientific research and development services	5417	300	98	46	9	36	17
Research and development in biotechnology	541711	141	30	14	3	16	1
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	146	59	30	6	19	i 10
Research and development in the social sciences and humanities	541720	13	9	2	*	1	6
Other professional, scientific, and technical services	other 54	316	44	21	i 2	19	4
Health care services	621–23	507	12	9	2	2	1
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	2,418 - 3,011	39	3 - 40	*	0 - 30	0 - 8
All companies (number of domestic employees)	–	21,213	1,832	1,232	130	426	174
Small companies							

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				Total	With PhD		
10–19 ^b	–	79	35	25	4	8	3
20–49	–	257	83	50	7	26	8
Medium companies							
50–99	–	356	85	47	7	29	9
100–249	–	719	127	74	8	38	15
Large companies							
250–499	–	760	105	62	7	31	12
500–999	–	859	100	61	6	29	10
1,000–4,999	–	2,854	305	213	20	63	29
5,000–9,999	–	1,677	182	117	14	37	28
10,000–24,999	–	3,518	267	178	20	68	22
25,000 or more	–	10,135	542	405	37 i	98	40

* = amount < 500 employees; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

^a Researchers include R&D scientists and engineers and their managers.

^b The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.

Note(s):

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2019.